

# THE MAIN APPROACHES TO THE DEVELOPMENT OF INNOVATIVE PHARMACEUTICAL INDUSTRY OF THE RUSSIAN FEDERATION IN THE CONTEXT OF GLOBALIZATION

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## ABSTRACT

Pharmaceutical industry - one of the few areas in which innovations affect all of us, because ultimately have a direct impact on the duration and quality of life for us and our loved ones.

In the presence of a strong market and a lack of understanding of the need for innovation is necessary, in our opinion, investing in basic research and facilitate the process of innovation in the pharmaceutical industry by the state and society.

For the targeted development of pharmaceutical industry seems appropriate to determine at the state level prospects for the domestic pharmaceutical industry and its role in the international market, and develop a drug "doctrine" of Russia.

This paper analyzed the problems of the state associated with the pharmaceutical market in the globalization period.

Also investigated the theoretical aspects of the modern study of globalization in the light of the analysis for the global pharmaceutical industry and analyzes the major political and economic factors that have the most significant impact on the production of pharmaceuticals.

## UDC CODE & KEYWORDS

■ UDC: 615.1 ■ Pharmaceutical Industry ■ Pharmaceutical Market ■ Period of Globalization ■ Production of Pharmaceuticals ■ Process of Drug Development.

## INTRODUCTION

Production of modern pharmaceutical industry is becoming increasingly important for health care is constantly increasing world population.

One of the most important indicators of economic development of the state is the country's ability to develop its own drugs.

The pharmaceutical industry is one of the most technology-intensive industries of the Russian Federation, which reflects the health situation in the country, which depends largely on the sustainable development of the pharmaceutical industry on the basis of national drug policy, since provision of medicines is an important part of state policy.

This is the relevance of the chosen research topic.

## Main text

The main purpose of consumption of goods and services to the pharmaceutical market in the country is to improve the quality of the health potential as an indicator of innovation development of the country.

Due to the fact that the process of drug development is one of the most risky and lengthy in comparison with the development of innovative products in other industries, the development of the pharmaceutical industry is a national security issue.

Due to the fact that the growth in demand for drugs in Russia is virtually independent of economic ups and downs, drug companies face increasing competition in the market, which is associated with high and stable growth of production and profits.

Given this, pharmaceutical companies are forced to look for fundamentally new model of development, the new principles of relations on the market, create a new philosophy of existence in a changing health care system.

Given that the current world market for pharmaceutical products is a multi-level education with a consistently high growth rates of production, sales and profitability, growth in world industrial production of pharmaceuticals over the last 15-20 years differs consistently high rate compared to the world's industrial sector and its chemical sector [3].

Due to the fact that financial crises have led to the bankruptcy of a huge number of pharmaceutical companies, as well as the entire system of national health care, a Russian drug policy is "working" in low-budget funding.

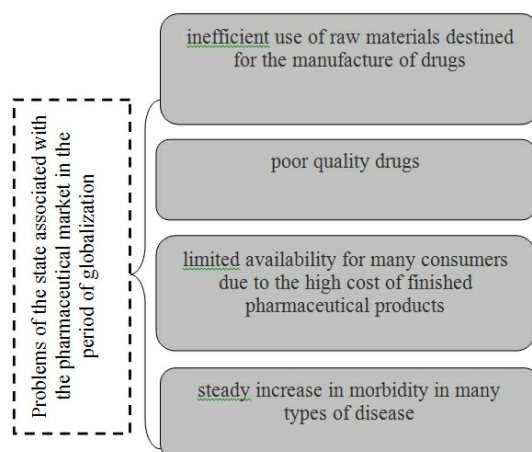
Accordingly, as the lack of innovative pharmaceutical development, we can distinguish minimized the development of market factors regulating pharmaceutical production, pharmaceutical companies out of the system of sectoral management, which, in turn, led to the disruption of the production of medicines.

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It becomes clear that, for the economy to the market rules liberalizing the business environment is not enough and the state, part of which decreased markedly in social programs, we have to stop to control the management of pharmaceutical manufacturing.

In the study, were examined in more detail, the problems faced by the State with economies in transition in the globalization period (Fig. 1).

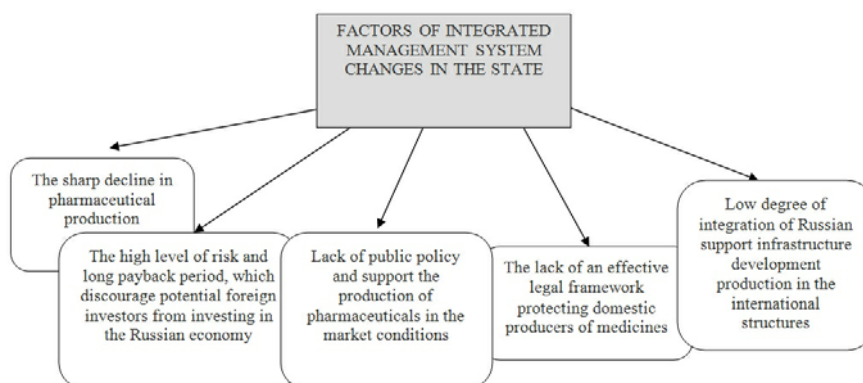
Figure 1. Problems of the state associated with the pharmaceutical market in the period of globalization



Source: Author

The scale of the process of improving the efficiency of production of drugs in the transitional period determined by a complex change in the economic system in the state and nation-wide economic crisis (Fig. 2).

Figure 2. Complex set of factors of changes in the state system of management



Source: Author

In the transition to an innovative type of pharmaceutical production, economics, organization and strategic management are particularly important.

The experience of developed countries has shown that innovative changes in the state guarantee the sustainable development of the Russian economy even in the context of globalization and the general crisis of the late XX early XX I.

In the process of globalization market pharmaceutical products, as well as the actual production of medicinal preparatv in the Russian Federation, are undergoing significant change that requires an adequate reflection of the processes in scientific research.

In the last ten - fifteen years there is a serious struggle for the Russian pharmaceutical market.

The reason is that studies the economic aspects of development and production, as well as storage and sales of medicines contribute to the development of pharmaceutical industry and are the national security issue.

However, analyzing the scientific literature (Fig. 3), regarding the research topic, it is concluded that the questions of formation and development of the Russian pharmaceutical market, as well as the state's role in improving the socio-economic efficiency of the pharmaceutical market in our literature are not sufficiently investigated.

Also, in the course of the study used the classics of economics: Adam Smith, A. Weber, P. Vernona, V. Kristallera, V. Leontiev, T. Hagerstranda, J. Schumpeter, and many others.

Also, in many works of Russian scientists have been proposed and justified the ways and means necessary transition to an innovative type of reproduction, as well as in their work proposed mechanisms, models, organizational management structure of the organization.

Based on the analysis of the periodical literature, it becomes clear that a sufficient methodological support for competent strategic management of innovation in the pharmaceutical industry produced less

But it requires the same level of scientific study, as well as forecasts from the most comprehensive use of new information technologies that address the diversity and level of risks of innovation.

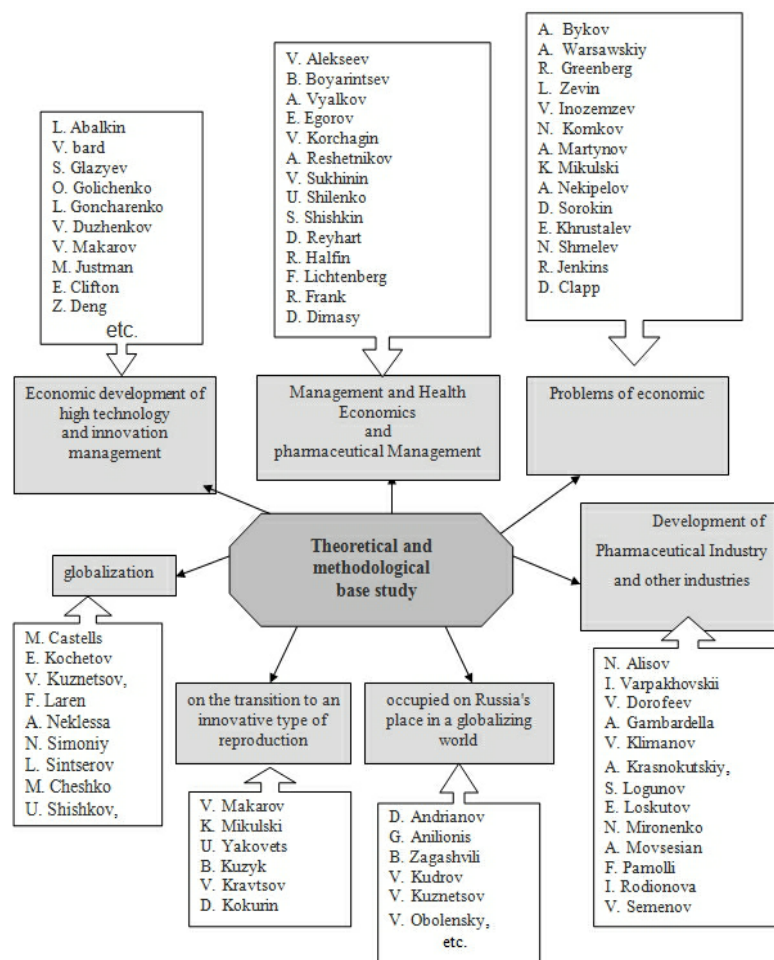
Theoretical and methodological issues of priority development of innovation and the use of innovations in the industry need for adjustments and additional studies.

Many of the innovative type of reproduction are fundamental and require further in-depth, continuous research and their transformation.

In a study the effect of strategic management perspective of innovation pharmaceutical industry, had the following objectives:

1. to investigate the theoretical aspects of the modern study of globalization in the light of the analysis for the global pharmaceutical industry;
2. identify the main stages of formation and development of the modern pharmaceutical industry;
3. analyze trends and challenges of the global and domestic pharmaceutical industry;
4. determine the strategic direction of industry development in a globalizing world economy;
5. analyze the major political and economic factors that have the most significant impact on the production of drugs;
6. characterize the role of Russia in the global pharmaceutical market, features and priorities for the development of pharmaceutical industry in the context of globalization.

Figure 3. Theoretical and methodological basis of research



Source: Author

Globalization - the result of the evolution of the global economy, which is a qualitatively new stage in the process of internationalization of economic life on the planet.

By itself, globalization as a process that could not arise if it is not preceded by large-scale, long-term and inclusive process of internationalization, had prepared for her material and political foundation.

Based on the analysis of competitiveness of the world pharmaceutical market in 2009, Russia ranked - 68th, in 2010 - 72 among 133 countries) [2].

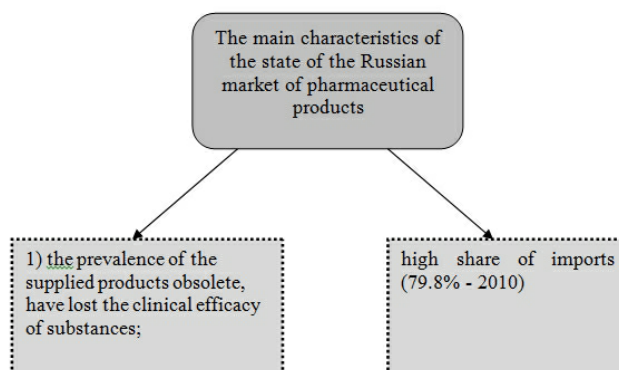
World experience shows that any state, regardless of the political system spends a significant proportion of the budget to meet the needs of people in medicine.

Keep in mind that countries with high levels of economic development, as a rule, are dedicating a lot of money.

It is also necessary to understand that drug policy is a policy of the state, aiming at a comprehensive solution of problems in the pharmaceutical sector, which covers research in the field of medicines, their manufacture, distribution.

Analyzing the problem of creating a pharmaceutical, it is necessary to take into account the state of the domestic market of pharmaceutical products (Fig. 4).

Figure 4. The main characteristics of the state of the Russian market of pharmaceutical products



Source: Author

The analysis suggests that the domestic market segment is dominated by products launched in the production of 70-80s.

Also, it should be noted that the proportion of modern and innovative domestic products is less than 1%, while the share of imports innovative products on the Russian market, with 39% (2010).

Currently, the domestic pharmaceutical industry produces about three thousand names of medicines, which is narrower than the imported variety.

The practice of large pharmaceutical companies, confirms that production of its own substances (pharmacologically active compounds out of which finished medicinal products) in Russia practically ceased.

This is a major obstacle to the development of the Russian pharmaceutical industry.

Sales of pharmaceutical products in the Russian Federation in 2010 amounted to final prices of the consumption of about 298 billion rubles.

The consumption of drugs per capita over the past three years has grown almost in 2 times - from 1200 rubles in 2004 to 2088 rubles in 2010.

This suggests that the pharmaceutical industry, playing in gross returns, however, an average of 68% provides national health care medicines dispensed in the quantity of packages of drugs, the hospital sector, this figure reaches 72%.

Studies have shown that export of medicines in Russia is insignificant (193.4 million U.S. dollars in 2009) and do not correspond to the possibilities of the Russian pharmaceutical industry.

Based on an analysis of the current state and development of the pharmaceutical market, it was found that the industry needs the latest innovations in the field of diagnostics, treatment and prevention, an effective system of training and retraining of medical personnel, modern high-tech information systems.

This requires a significant increase in the place of health in the budget priorities at all levels.

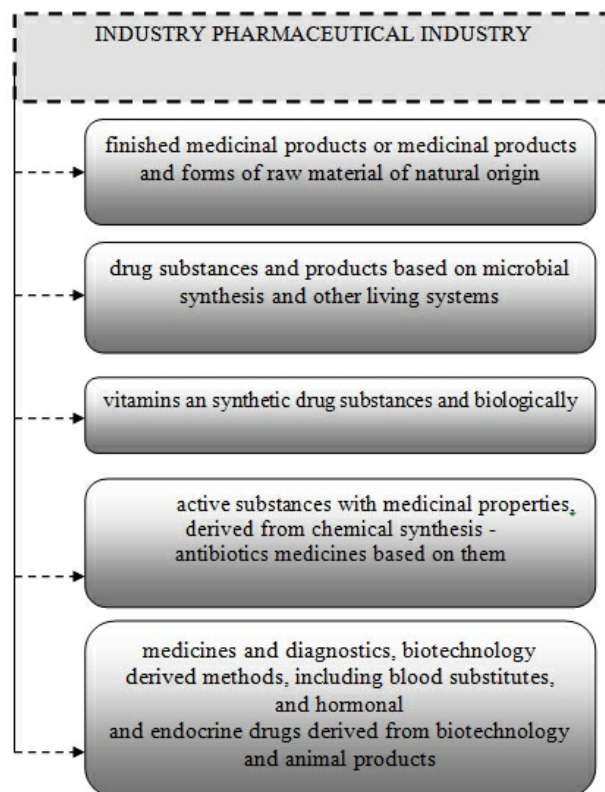
However, despite some local difficulties, of course, pharmaceutical production and in the near future will be extremely profitable, and "innovative rich" due to the continuous updating of knowledge that result from the human genome, and microorganisms.

Evidence of this is the dynamics of growth in sales of medicines, which from 1995 to 2010 doubled to about 620 billion U.S. dollars according to the international analytical agency IMS Health Studies have shown that the main objective of State policy to develop the national pharmaceutical industry in 2020 is to create conditions for its transition to innovation model of development

This should lead to increased availability of public and health medicines domestically produced, with an overall increase in the supply of medicines to the needy as the average level of quantitative and qualitative indicators [3].

In connection therewith, in order to radically improve the situation with the health of citizens, there should be a qualitative leap in the health care system.

Figure 5. Schematically displays the classification of pharmaceutical industries.



Source: Author

The analysis suggests that the 20 leading manufacturers now account for about 45% of the global medicines market.

The vast majority of drugs (about 75%, coming on the world pharmaceutical market) produced a relatively small number of countries (USA, Japan, Germany, France, Italy, Britain, Canada, Switzerland, China, India, Brazil, Mexico).

However, developing countries' share in world production of medicines over the past 5 years has increased dramatically and reached approximately 20% [4].

It should be noted that the Russian pharmaceutical industry is practically in the international marketplace.

However, exports of finished pharmaceutical products in January-July 2010 increased by 41.4% to 699.5 million USD. compared to the same period last year [3].

The main export countries - Uzbekistan, Kazakhstan, Russia and the Caucasus region. Moreover, Uzbekistan is leading the list.

The study showed that in January-December 2010 index of pharmaceutical products amounted to 103.1% for January-December 2009

At the same time in December 2010 it was 66.8% by December 2009 and 114.6% - by November 2010 [4].

The volume of production of medicines in January-December 2010 amounted to 127.3 billion rubles [4].

It is impossible not to draw attention to the fact that in January-December 2010 compared with the corresponding period of 2009, an increase in the production of medicines containing penicillin or other antibiotics in vials; drugs for cancer treatment in packages of painkillers, antipyretics and anti-inflammatory drugs in vials, blood substitutes and other resources plazmozameschayuschie in ampoules, drugs for the treatment of eye diseases in packages of drugs to treat diseases of the endocrine system, digestive disorders and other diseases in the packaging and vials; vitamin preparations in packages [3].

Despite the above facts, it is advisable to pay special attention to the fact that the production of drugs on the major pharmacotherapeutic groups are dependent on the amount and timing of government funding and effective demand in the commercial sector of the market of medicines.

In general, research has shown, in Russia the demand for essential medicines are not fully satisfied, especially among the poor, although their use can improve public health, with moderate funding.

The findings of this study and perspectives for further work in this direction.

Analyzing the structure of the pharmaceutical industry, a study concluded that significant environmental degradation in the world and Russia, decreased quality of life, the lack of an effective health system and other factors lead to increased demand for pharmaceuticals.

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Currently, the market of medicines is characterized by low levels of subsidy from the state budget and through health insurance and is one of the fastest growing segments of the domestic market.

Each year, the cost of pharmaceutical companies on research projects is increasing.

In 1991, their R & D spending accounted for about 15% of the total sales of medicines, by 2010 this figure approached 21% [4].

Thus, the global perspective of the pharmaceutical sector are determined by the latest achievements in chemistry, biology and medicine, as well as the development of the innovation system, which includes major pharmaceutical companies and their environment by various forms of small business innovation, which takes on the most risky stages of the development of new products and services .

Studies have shown that the Russian pharmaceutical market is dominated by generic drugs.

Generic (generic, zhenerik, generic drug, Eng. Generic) - it's generic pharmaceuticals, which is a copy of the original drug (may be different in composition aids), but without patent protection.

Inside the generic sector, more than half of total sales accounted for by branded generics, about a third of the share of generics and the absence of the lowest part consists of traditional products, whose share is reduced from year to year.

However, a necessary requirement for the sale of generic drugs - a proven pharmaceutical, biological and therapeutic equivalence to the original drug.

There was also carefully analyzed the legal framework of pharmaceutical industry of the Russian Federation.

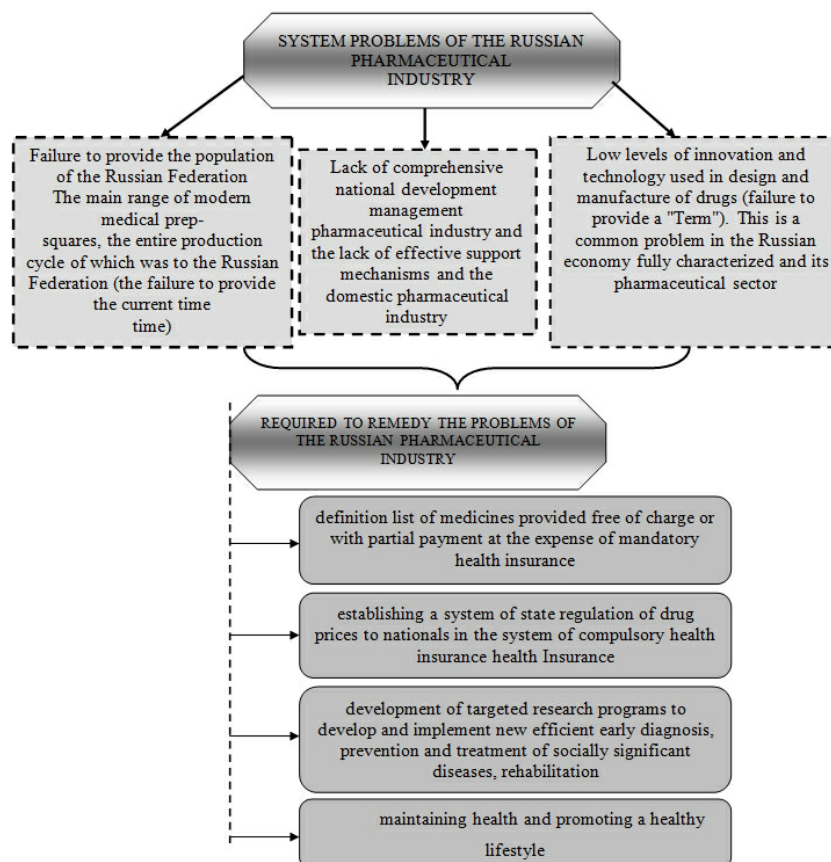
During the analysis, it was concluded that the overall structure of the regulatory framework meets the pharmaceutical industry generally recognized at the international level recommended by WOZ.

However, at the same time the Russian legal framework is characterized by a number of significant shortcomings, which affect the efficiency of the system as a whole (lack of enforcement, the slow reform of pharmaceutical legislation, etc.)

Thus, certain conclusions have been made, which suggests that the increase in socio-economic efficiency of the market dictates the need for public policies aimed at improving public health, as well as reducing transaction costs that determine such an increase.

Systemic problems of the Russian Federation, the pharmaceutical industry and the solutions discussed in detail in Fig. 6.

Figure 6. Systemic problems of the Russian Federation, the pharmaceutical industry and their solutions



Based on data from Figure 6, we conclude that the Russian government should commit to a permanent increase in government spending (federal and regional levels) to improve the financing of drug supply the population with the economic growth and prosperity.

In addition to these measures, we need to strengthen the state's role in financing innovation activities related to sustainable development, the pharmaceutical industry.

Also, it is important to ensure a decent legal framework so that on the basis of these documents state, in accordance with the Russian Constitution must guarantee the availability of the population to an effective, safe and quality medicines.

In connection with the foregoing, the basic strategic direction of development of domestic pharmaceutical manufacturers is to organize the production of high-quality original products and generics, which are competitive against imported medicines.

Consequently, Russia's state-required competitive national pharmaceutical industry, providing people effective and safe medicines, developing research, offering products for export of highly processed.

The main reason for the status quo is a small number of innovative drugs in its product portfolio of domestic companies. On the one hand, the Russian pharmaceutical manufacturers focused on the production of low-margin generic drugs, which severely limits their opportunities for financial investment in the development of innovative drugs. On the other - the absence of a sufficient number of innovative drugs in its product portfolio of Russian producers actually closes them access to foreign markets and cannot significantly increase profitability.

So, 2011 promises to leave the market iconic brands and marks a new phase of innovation. He also will be a defining year for the development of health care reforms in key pharmaceutical markets in the period of global economic recovery. To maintain and strengthen its hold on the rapidly growing market for pharmaceutical manufacturers will be important to focus on the individual values of the patient and taking into account the specific needs of health systems.

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